

Application No.: 09/892,543
Amendment Dated: February 5, 2004
Reply to Office Action of: December 2, 2003

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims

1. (Currently Amended) A method for producing an ethylene-vinyl acetate copolymer, comprising:

 copolymerizing ethylene and vinyl acetate in an alcohol-based solvent, so as to form a solution containing said ethylene-vinyl acetate copolymer; and

 recovering unreacted vinyl acetate from said solution after copolymerizing;

 wherein said solution is introduced into a recovery column through an upper portion thereof, a vapor of an alcohol-based solvent is introduced into said recovery column through a lower portion thereof, a solution comprising ethylene-vinyl acetate copolymer is taken out of said recovery column through a lower portion thereof, and unreacted vinyl acetate in the solution is taken out of said recovery column with the vapor of the alcohol-based solvent through an upper portion thereof;

 wherein said alcohol-based solvent, the vapor of which is introduced into said recovery column, is deoxidized in advance of being introduced into said recovery column and an oxygen concentration in said alcohol-based solvent is not more than 60 ppm ~~when said alcohol-based solvent is used in recovering said unreacted vinyl acetate.~~

2. (Previously Presented) The method according to claim 1, wherein said oxygen concentration is not more than 30 ppm.

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3. (Previously Presented) The method according to claim 1, wherein an oxygen concentration in said alcohol-based solvent for copolymerizing is not more than 15 ppm.

4. (Currently Amended) A method for producing a saponified ethylene-vinyl acetate copolymer, comprising:

copolymerizing ethylene and vinyl acetate in an alcohol-based solvent to obtain a solution containing an ethylene-vinyl acetate copolymer;

recovering unreacted vinyl acetate from said solution after copolymerizing; and

saponifying said ethylene-vinyl acetate copolymer;

wherein said solution is introduced into a recovery column through an upper portion thereof, a vapor of an alcohol-based solvent is introduced into said recovery column through a lower portion thereof, a solution comprising said ethylene-vinyl acetate copolymer is taken out of the recovery column through a lower portion thereof, and unreacted vinyl acetate in the solution is taken out of said recovery column with the vapor of the alcohol based solvent through an upper portion thereof,

wherein said alcohol-based solvent, the vapor of which is introduced into said recovery column, is deoxidized in advance of being introduced into said recovery column and an oxygen concentration in said alcohol-based solvent is not more than 60 ppm ~~when said alcohol-based solvent is used in recovering said unreacted vinyl acetate.~~

5. (Previously Presented) The method according to claim 4, wherein a saponification

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degree of said saponified ethylene-vinyl acetate copolymer is at least 90 mol %.

6. (Previously Presented) The method according to claim 4, wherein said oxygen concentration is not more than 30 ppm.

7. (Previously Presented) The method according to claim 4, wherein an oxygen concentration in said alcohol-based solvent for copolymerizing is not more than 15 ppm.

8. (Previously Presented) The method according to claim 1, wherein said alcohol-based solvent is deoxidized in advance of said copolymerizing.

9. (Previously Presented) The method according to claim 4, wherein said alcohol-based solvent is deoxidized in advance of said copolymerizing.

10. (Previously Presented) The method according to claim 1, wherein said alcohol-based solvent is deoxidized in advance of said recovering.

11. (Previously Presented) The method according to claim 4, wherein said alcohol-based solvent is deoxidized in advance of said recovering.

12. (Previously Presented) The method according to claim 1, wherein said alcohol-

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based solvent comprises a member selected from the group consisting of an alcohols having 1 to 4 carbon atoms and mixtures thereof.

13. (Previously Presented) The method according to claim 4, wherein said alcohol-based solvent comprises a member selected from the group consisting of an alcohols having 1 to 4 carbon atoms and mixtures thereof.

14. (Previously Presented) The method according to claim 1, wherein said ethylene-vinyl acetate copolymer further comprises, in copolymerized form, a comonomer selected from the group consisting of α -olefins, unsaturated acids, salts of unsaturated acids, anhydrides of unsaturated acids, monoalkyl esters of unsaturated acids and dialkyl esters of unsaturated acids, ethylenically unsaturated nitriles, ethylenically unsaturated amides, olefin sulfonic acids, salts of olefin sulfonic acids, alkyl vinyl ethers, vinyl ketone, N-vinylpyrrolidone, vinyl chloride and vinylidene chloride.

15. (Previously Presented) The method according to claim 4, wherein said ethylene-vinyl acetate copolymer further comprises, in copolymerized form, a comonomer selected from the group consisting of α -olefins, unsaturated acids, salts of unsaturated acids, anhydrides of unsaturated acids, monoalkyl esters of unsaturated acids and dialkyl esters of unsaturated acids, ethylenically unsaturated nitriles, ethylenically unsaturated amides, olefin sulfonic acids, salts of olefin sulfonic acids, alkyl vinyl ethers, vinyl ketone, N-

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vinylpyrrolidone, vinyl chloride and vinylidene chloride.

16. (Previously Presented) The method according to claim 1, wherein an ethylene content of said ethylene-vinyl acetate copolymer is at least 20 mol% but not more than 70 mol%.

17. (Previously Presented) The method according to claim 4, wherein an ethylene content of said ethylene-vinyl acetate copolymer is at least 20 mol% but not more than 70 mol%.

18. (Previously Presented) The method according to claim 4, wherein a melt index of said saponified ethylene-vinyl acetate copolymer is from 0.1 to 200g/min, as measured at 190°C under a load of 2160g.

19. (Canceled)

20. (Canceled)

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BASIS FOR THE AMENDMENT

Claims 1 and 4 have been amended as supported by Example 1 and the specification at pages 1-6.

Claims 19 and 20 have been canceled.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1-18 will now be active in this application. Claim 19 stands withdrawn from further consideration as being drawn to non-elected subject matter.

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INTERVIEW SUMMARY

Applicants wish to thank Examiner Reddick for her helpful and courteous discussion with Applicants' Representative on January 8, 2004. During this discussion the claims as currently amended were discussed. In addition, it was pointed out that Blumberg et al deoxidize the solvent used during polymerization, and not during recovery as claimed.